

A REVIEW OF THE MEXICAN AND CENTRAL AMERICAN  
GENUS *TRACHYPHLOEOMIMUS*, WITH NEW SPECIES  
AND NEW SYNONYMY (COLEOPTERA:  
CURCULIONIDAE, OTIORHYNCHINAE)

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ABSTRACT

*Thamiras* Champion (1911) is synonymized under *Trachyphloeomimus* Champion (1911), and 5 new species (*alternatus*, *championi*, *mexicanus*, *sharpi*, and *undulatoides*) of these montane weevils are described from Mexico. A key, photographs of holotypes, descriptions, and illustrations of genitalia are included.

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The genus *Trachyphloeomimus* was described by Champion (1911) who included 2 species and 1 variety (the type-species *spurcus* Champion, *solitarius* Sharp, and *solitarius* var. Sharp). In the same publication the genus *Thamiras* was described with a single species *undulatus* Champion. A careful check of these specimens has indicated that *Thamiras* is congeneric with *Trachyphloeomimus* (NEW SYNONYMY). Most of the characters used in my key and diagnosis, previously covered by a dirty incrustation, were visible only when specimens were treated in a detergent solution in an ultrasonic cleaner. *T. solitarius* variety is a valid species.

The genitalia were dissected, and they show distinct specific differences. In spite of the greatly diverse genitalia, I believe these species form a natural group and should not be separated at the generic level. Weevils often exhibit great variability in genitalic structures, as can be seen in the genus *Dorytomus* (O'Brien, 1970).

The apparent relictual distribution pattern may be an artifact of collecting. These weevils are relatively rare in collections. Half the species are known from only the type specimen. Recent collecting produced series of 3 species (2 of them new) from under stones in mountain meadows near Mexico City. Perhaps this paper will help to bring more specimens or species of these unusual high altitude weevils to the attention of specialists.

*Trachyphloeomimus* Champion

*Trachyphloeomimus* Champion, 1911:342.

*Thamiras* Champion, 1911:343, NEW SYNONYMY.

Rostrum at least as long as head, stout, convex in lateral view, widest at apex; nasal plate strongly emarginate, triangular; scrobes visible in dorsal view, descending laterally to lower anterior margin of eyes; eyes coarsely faceted, not prominent, distinctly inset, oval, moderately large; frons foveate or sulcate, with lateral protrusions; antennae with a gradually widened scape reaching the anterior margin of prothorax, clothed

densely with scales and erect scalelike setae; funicle 7 segmented, segments 1 and 2 very elongate, 1st at least 1/4 to 1/3 longer than 2nd, 3 and 4 slightly longer than broad, 5 to 7 at least submoniliform, with setae only; club stout, ovate; mentum small; prothorax broader than long, apex strongly constricted, tubulate; scutellum small to minute (may not be visible); elytra much broader than prothorax, oval to elongate oval, humeri distinct, somewhat produced anteriorly; metasternum short, metepisternum very narrowly exposed; ventral abdominal segment 2 as long as

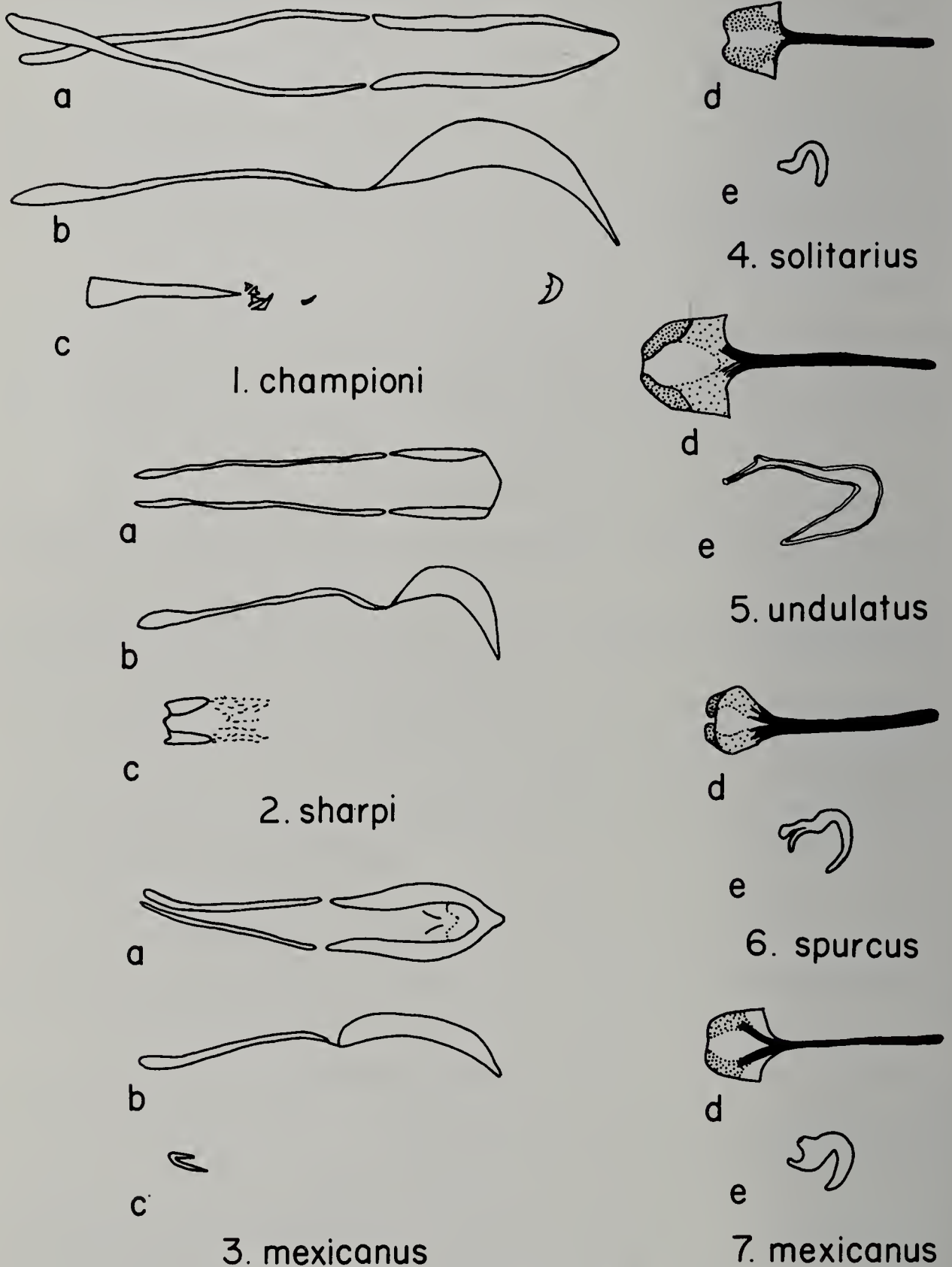


Fig. 1-3 male: a) dorsal view of phallus; b) lateral view of phallus; c) sclerotized portions of internal sac.

Fig. 4-7 female: d) dorsal view of eighth sternite; e) lateral view of spermatheca.

3 and 4 united, 1st suture straight to strongly arcuate; femora strongly clavate, unarmed; tibiae uncinatae; corbel closed; 3rd tarsal segment broadly bilobed, lobes narrow and widely separated, 4th segment elongate (ca. twice as long as 3rd); claws long, simple, free and widely divergent; body densely squamose, with erect setae; apterous.

Type-species: *T. spurcus* Champion

When Champion (1911) described the genus *Trachyphloeomimus* he included 2 species, *spurcus* Champion and *Trachyphloeus solitarius* Sharp. In the same publication he described the monotypic genus *Thamiras*, type-species *undulatus* Champion. A comparison of Champion's 2 generic descriptions shows 3 significant differences that must be considered since I consider the 2 genera congeneric. Segments 1 and 2 of the funicle are said to be equal in length in *Trachyphloeomimus* and the 2nd longer than the 1st in *Thamiras*. Actually these segments of the type species are identical, the 1st segment nearly 1/3 longer than the 2nd. The subtubulate prothorax is obvious in both species when the incrustation is removed. The feebly arcuate 1st abdominal suture of *Trachyphloeomimus* versus the straight suture of *Thamiras* cannot be used as a diagnostic character either, as among the 8 species now recognized, all degrees of variation are present from straight to strongly sinuate, an extreme of the feebly arcuate form described by Champion.

#### Key to *Trachyphloeomimus* Species

1. Eighth interval strongly produced behind humeri; declivital tubercles on 5th interval strongly produced; scales on prothorax and elytra recumbent and striate ..... 2
- 1'. Eighth interval at most weakly produced; if declivital tubercles on 5th interval strongly produced, scales on prothorax and elytra erect, striate, and frayed subpectinate ..... 4
- 2(1). Setae on inner surface of femora and tibiae very long, longer than width of tibiae; scales on prothorax and elytra sparse, widely separated especially on prothorax; scutellum with fine setae ..... *championi* O'Brien, sp. nov.
- 2'. Setae on inner surface of femora and tibiae ca. 1/2 width of tibiae; scales on prothorax and elytra dense, touching or imbricate; scutellum glabrous or with clavate scalelike setae ..... 3
- 3(2'). Rostrum strongly widened at apex, frons narrower, ca. 1/2 width of apex of rostrum; antennal scape slender, nearly straight; 6th interval tuberculate near declivity .....  
..... *undulatus* Champion
- 3'. Rostrum scarcely widened at apex, frons less narrow, ca. 2/3 width of apex of rostrum; antennal scape clavate, moderately curved; 6th interval not tuberculate near declivity .....  
..... *undulatoides* O'Brien, sp. nov.
- 4(1'). Scales on rostrum, head, and prothorax erect ..... 5
- 4'. Scales on rostrum recumbent or at most suberect, on head recumbent or at most subrecumbent, and on prothorax recumbent ..... 6



Fig. 8-11 *Trachyphloeomimus* spp.: 8) *undulatus*; 9) *championi*; 10) *sharpi*; 11) *solitarius*.

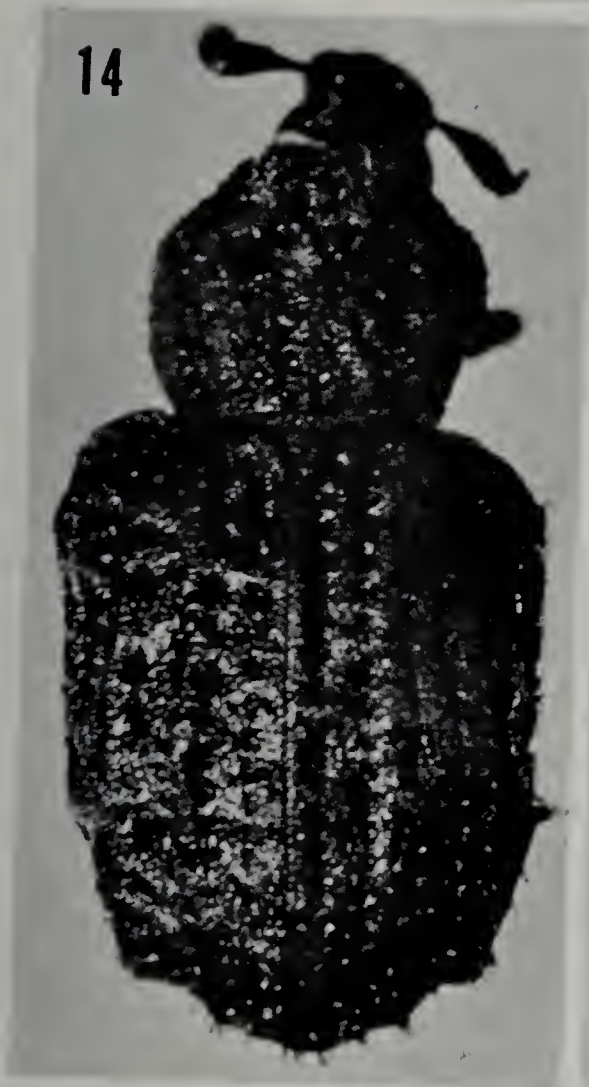


Fig. 12-15 *Trachyploeomimus* spp.: 12) *spurcus*; 13) *mexicanus*; 14) *undulatoides*; 15) *alternatus*.

- 5(4). Head and prothorax with small papillae-like tubercles, clothed with erect stellate scales ..... *solitarius* Sharp
- 5'. Head and prothorax with punctures and erect, striate, and frayed subpectinate scales ..... *sharpi* O'Brien, sp. nov.
- 6(4'). Humeri formed from base of 7th interval, 7th interval weakly convex, 8th interval slightly expanded behind humerus ..... 7
- 6'. Humeri formed from base of 6th interval, 7th interval strongly convex, 8th interval not expanded .... *mexicanus* O'Brien, sp. nov.
- 7(6). Prothoracic punctures covered with scales; basal  $1/3$  to  $1/2$  of even intervals lacking setae; apical area of rostrum with median narrow sulcus, remainder at most finely punctate ..... *spurcus* Champion
- 7'. Prothoracic punctures not covered with scales; all intervals with complete row of setae; apical area of rostrum lacking sulcus, with coarse dense punctures .....  
..... *alternatus* O'Brien, sp. nov.

*Trachyphloeomimus championi* O'Brien, NEW SPECIES

(Fig. 1,9)

Black; clothed moderately sparsely with recumbent striate black and brown and a few white scales; strongly punctured; with sparse erect coarse setae.

*Rostrum* scarcely wider at apex than base; base to antennal insertion densely clothed with recumbent striate blackish brown scales; with 4 rows of erect coarse black setae; with 3 weak sulci, median ending in apical fovea, lateral sulci beginning in lateral fovea next to eye. Apex with small sparse recumbent golden scales, and very sparse erect fine golden setae. *Head* shallowly densely punctate, clothed with dense recumbent striate scales; frons distinctly though moderately shallowly foveate; lateral protrusions not extending over eyes, clothed with black subrecumbent scales and 3 erect black scalelike setae. *Antennae* with stout, nearly straight scape clothed with moderately dense recumbent striate black scales and sparse erect coarse setae, funicle with sparse fine golden setae. *Prothorax* with sides broadly rounded from base to suddenly constricted weakly tubulate apex; unevenly very coarsely deeply rugosely punctate; areas between punctures shining and sparsely clothed with recumbent striate black scales, marginal scales not noticeably paler in color, with sparse erect fine to moderately coarse brown to black setae. *Scutellum* small, round, subglabrous, with small fine setae. *Elytra* with subrectangular humeri at approximately a  $60^\circ$  angle with base; interval 8 expanded behind the humeri; striae punctures large, round, moderately shallow, separated by twice their own diameter, each with a small seta, intervals 3, 5, and 7 convex, remainder flattened; 5th interval strongly broadly tuberculate on declivity; moderately clothed with recumbent striate black and brown scales; odd intervals with even rows of erect, narrowly clavate, black scalelike setae, 3 to 4 rows on declivital tubercle, even intervals with few such setae before declivity, then evenly distributed. *Venter* evenly clothed with moderately sparse recumbent striate whitish brown scales,

with sparse fine golden brown setae; 1st suture strongly sinuate; 5th segment with a deep broad median depression. *Legs* clothed with moderately dense recumbent striate black scales and sparse very elongate fine golden setae; setae longer than width of tibiae; corbel plate with coarse erect setae. Tarsi densely pubescent ventrally. Length: 5.5 mm.

Holotype: male. MEXICO: State of Veracruz, Cofre de Perote, n. slope, 10.0 miles south Las Vigas, 9600 ft., 24-VIII-1967, Ball, T. L. Erwin, R. E. Leech. [C. W. O'B.] (1).

This species appears to be most closely related to *undulatus*, but its very broad frons and much larger size will readily separate them. The very sparse scales, shiny surface, and larger size will readily separate it from all species.

*Trachyploeomimus undulatus* (Champion)

(Fig. 5, 8)

*Thamiras undulatus* Champion, 1911:343, NEW SYNONYMY

Black; clothed densely with recumbent striate imbricate black, brown, and a few white scales; with sparse elongate narrow to clavate scalelike setae.

*Rostrum* strongly widened at apex; base to antennal insertion clothed densely with recumbent imbricate striate scales, strongly convex with a narrow median sulcus, and 4 rows of long erect brownish black scalelike seta; apex shining, subglabrous, with sparse long fine whitish brown setae. *Head* densely clothed with recumbent imbricate striate scales, punctures not visible; frons densely clothed with scales, much narrower (ca.  $\frac{1}{2}$ ) than apex of rostrum, broadly depressed, distinctly separate from rostrum, lateral protrusions weak, not expanded over eyes, with 3 very long erect black scalelike setae. *Antennae* with moderately slender, nearly straight scape clothed with moderately dense recumbent striate black scales and sparse erect coarse setae; funicle with sparse fine golden setae. *Prothorax* evenly expanding from base to suddenly constricted, strongly tubulate apex; densely clothed with recumbent striate black, brown and

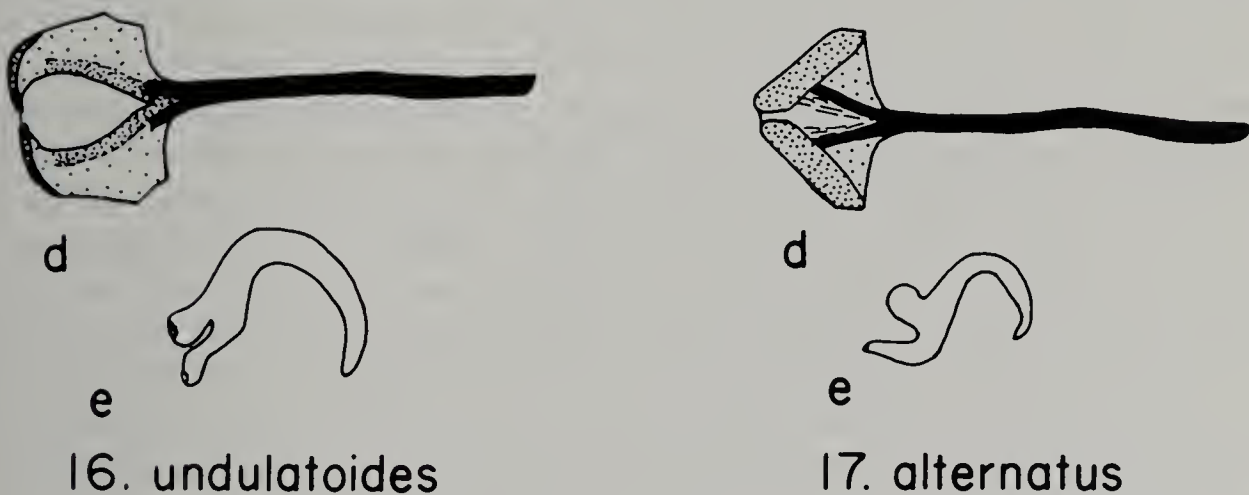


Fig. 16-17 female: d) dorsal view of eighth sternite; e) lateral view of spermatheca.

white scales; punctures not visible; surface unevenly undulate with uneven rows of erect coarse scalelike black setae; lateral margin clothed with white scales. *Scutellum* small, triangular, glabrous. *Elytra* with anteriorly projecting humeri, subrectangular, with interval 8 strongly expanded behind humeri; striae punctures unevenly separated, distinct, round, moderately deep, separated by 1 to 1½ times their own diameter, each with small fine barely visible seta; intervals 3, 5, and 7 unevenly convex, remainder slightly convex, surface in general unevenly undulating; intervals 5 and 6 tuberculate at declivity; odd intervals with an even row of narrowly clavate black scalelike setae, even intervals with an uneven row of sparse similar setae, becoming denser from base to apex. *Venter* evenly clothed with dense recumbent striate blackish brown scales and sparse suberect fine golden setae; 1st suture straight; 5th segment shallowly indistinctly depressed medially with glabrous finely punctate apex. *Legs* clothed densely with recumbent striate black scales, femora annulate with white scales; with suberect moderately long (less than ½ width of tibiae), coarse brown and white scalelike setae; corbel plate with coarse erect setae. Tarsi densely pubescent ventrally. Length: 4.3 mm.

Holotype: female. GUATEMALA: Totonicapam, 8,500-10,500 ft., VIII-1880, Champion [B.M.N.H.] (1).

This species can be separated readily from all others by the very narrow frons, distinctly rectangular humeri, and tuberculate 6th interval at the declivity. The distinctive undulate surface is found in only 1 other species, *undulatoides*, a somewhat smaller Mexican species.

*Trachyphloeomimus spurcus* Champion

(Fig. 6, 12)

*Trachyphloeomimus spurcus* Champion, 1911:342.

Black; clothed densely with recumbent striate black and brown scales; with sparse erect clavate striate black scalelike setae.

*Rostrum* scarcely wider at apex; base to antennal insertion densely clothed with subrecumbent imbricate striate dark brown scales, with 4 rows of erect, narrowly clavate, striate scalelike blackish-brown setae; with distinct median sulcus and lateral very indistinct sulci, with a pair of deep lateral foveae at base of eyes; apex with moderately sparse recumbent small round golden brown scales and sparse erect brown and golden coarse setae. *Head* shallowly densely punctured, clothed with dense recumbent striate dark brown scales; frons with distinct depression and small round deep median fovea; lateral protrusions distinct, expanding slightly over eyes, clothed with brown and black recumbent scales and 3 long erect brown and white scalelike setae. *Antennae* with stout, slightly curved scape clothed with dense recumbent striate black scales and sparse erect narrowly clavate black scalelike setae; funicle with moderately fine brown and golden setae. *Prothorax* gradually rounded to suddenly constricted, distinctly tubulate apex; unevenly coarsely deeply punctured, punctures hidden beneath scales; with dense recumbent striate black and brown scales; with uneven rows of sparse erect, narrowly clavate, striate black setae; with a pale brown narrow marginal line of scales. *Scutellum* small, triangular, glabrous. *Elytra* with humeri weakly rounded, with 8th interval very weakly expanded behind the humeri; striae punc-



tures small, round, shallow, separated by at least 3 times their own diameter; each with a minute fine seta; all intervals weakly convex, odd intervals somewhat more strongly so, 5th interval with a weak tubercle on declivity; densely clothed with nonimbricate recumbent striate black and brown scales; odd intervals with single even row of erect clavate striate scalelike setae, even intervals nearly lacking such setae before declivity, there becoming denser. *Venter* evenly densely clothed with recumbent striate pale brown, golden, and dark brown scales; with sparse, fine to moderately coarse, suberect setae; first suture evenly distinctly sinuate; 5th segment with broad deep apical median depression and two small lateral depressions. *Legs* densely clothed with recumbent striate black scales, and sparse suberect clavate white, brown and black setae; femora subannulate with brown scales; corbel plate of third tibia sparsely clothed with coarse setae. Tarsi moderately densely pubescent ventrally. Length: 3.8 mm.

Holotype: female. MEXICO: Truqui. Holotype [B.M.N.H.]. State of Mexico, Parque Nacional Miguel Hidalgo, 17-II-1972, 2900 meters, under stones, C. W. O'Brien [C.W.O'B.] (1); same data, except collector S. Rosenthal [C.W.O'B.] (4); Pradera de Salazar, 17-II-1972 [ca. 2900 meters], under stones, C. W. O'Brien [C.W.O'B.] (4); same data, except collector P. Reyes C. [C.W.O'B.] (1); [Pradera de] Salazar, 10-III-1968, A. Barrera [M.H.N.M.] (2); 4-II-1962, M. Olguin [R.M.V.C.] (2); 13-V-1962, M. Olguin [R.M.V.C.] (6); State unknown, Popo Park, 18-VIII-1968, R. Muniz V. [R.M.V.C.] (1).

This species is closely related to *championi* but can be separated readily from it by its smaller size, and denser scale cover. The very small stria punctures will separate it from all other species.

*Trachyphloeomimus solitarius* (Sharp)

(Fig. 4, 11)

*Trachyphloeus solitarius* Sharp 1911:177.

*Trachyphloeomimus solitarius* (Sharp), Champion 1911:343.

Black; clothed with recumbent striate scales and erect radiate-stellate scales, with sparse, unevenly distributed, erect striate clavate scalelike setae.

*Rostrum* weakly widened to apex; base densely papillate, with erect radiate-stellate black and brown scales on papillae; with 4 rows of erect clavate striate black, brown, and white scalelike setae; with a narrow distinct median sulcus extending onto frons; apex subglabrous with sparse coarse suberect setae. *Head* and frons strongly papillate, with erect radiate-stellate black, brown, and white scales on each papilla; frons depressed with distinct narrow median sulcus, lateral protrusions strongly expanded over eyes, clothed with white radiate-stellate scales and 1 to 3 (partially ribbed) erect, narrowly clavate white setae. *Antennae* with stout strongly sinuate scape, with moderately dense recumbent striate black scales on roughened subpapillate surface, with sparse suberect clavate setae. *Prothorax* with sides rounded at base, median area of sides subparallel, very slightly expanded towards apex, rounded and then constricted and subtubulate; densely coarsely papillate, clothed with erect

radiate-stellate black, brown, and white scales; with a median and 2 anterolateral white spots and a narrow marginal white line of scales; with uneven rows of erect striate narrowly clavate black setae; surface only slightly uneven except for papillae. *Scutellum* small, scarcely visible. *Elytra* with humeri slightly projecting anteriorly, then evenly rounded; 8th interval scarcely projecting behind humeri; strial punctures small, round, moderately shallow, unevenly separated, some not visible due to dense scales; each with a minute fine seta; all intervals moderately strongly convex; densely clothed with suberect imbricate striate brown, black, and white scales, maculate; humeral scales white; all intervals with even rows of short erect clavate striate brown and white setae. *Venter* weakly papillate, laterally densely clothed with radiate-stellate white scales, median area with sparse recumbent striate brown scales; with sparse suberect white scalelike setae; first suture weakly sinuate; 5th segment strongly convex, rugosely papillate, with an elongate median apical deep depression. *Legs* subpapillate with recumbent striate black scales; femora subannulate with white scales; with short suberect clavate white and brown setae; corbel plate of third tibia glabrous. Tarsi sparsely pubescent ventrally. Length 3.3 mm.

Holotype: female. MEXICO: State of Durango, Ventanas, Höge. [B.M.N.H.] (1).

This small species appears to be quite distinct from all other species. The papillate surface of the head and thorax and the radiate-stellate scales are very distinctive. Its short oval form is quite distinctive and it lacks any declivital tubercles.

*Trachyphloeomimus sharpi* O'Brien, NEW SPECIES

(Fig. 2, 10)

*Trachyphloeus solitarius* variety Sharp, 1911:178.

Black to reddish black; clothed densely with erect striate frayed subpectinate white, black, and brown scales; coarsely punctate and rugosely tuberculate; with uneven rows of erect, narrowly clavate, striate white setae.

*Rostrum* gradually widened to apex; base to antennal insertion coarsely tuberculate and punctate, with erect striate, unevenly frayed, subpectinate scales and 4 rows of erect striate clavate white setae, with distinct shallow sulcus extending onto the frons; apex with moderately dense recumbent striate white scales and sparse suberect clavate white setae. *Head* rugosely tuberculate, with erect to suberect striate frayed, subpectinate black and white scales; frons clothed with longer erect scales, appearing more convex and separate from head; medially sulcate, with weak lateral protrusions, weakly expanded over eyes, clothed with white scales and 3 long white striate clavate setae. *Antennae* with stout subtuberculate slightly curved scape, with dense erect striate black scales; with sparse erect black and white scales; funicle with coarse to fine brown and black setae. *Prothorax* with base strongly rounded with sides subparallel, very slightly expanded anteriorly, rounded to subtubulate apex; densely coarsely punctured, with sparse tubercles; densely clothed with erect striate frayed subpectinate white, black and brown scales; with a basal median black

spot and 2 lateral anteriorly forked black lines; with a narrow marginal white line; with uneven rows of sparse, narrow to clavate, erect, white setae. *Scutellum* small, round, clothed with scales. *Elytra* with humeri slightly produced anteriorly, evenly rounded behind; 8th interval very weakly expanded behind humeri; striae punctures moderately small, round, deep, separated by 1 to 1½ times their own diameter; no setae visible within punctures; intervals 3, 5, and 7 strongly convex, remainder slightly convex; densely clothed with recumbent to suberect striate frayed, frequently subpectinate, white, black and brown scales; with an uneven row of short striate clavate suberect scalelike white and brown setae; 5th interval weakly tuberculate at declivity. *Venter* finely subpapillate and coarsely rugosely punctate; clothed laterally with dense coarse frayed suberect white scales; with suberect clavate white scalelike setae; first suture moderately sinuate, subacutely arcuate at the middle; 5th segment basally convex, rugosely punctate, with broad apical median depression; with sparse suberect fine setae; apical margin smoothly convex, clothed with sparse recumbent pearlescent scales. *Legs* densely clothed with recumbent pearlescent-white striate scales and some white suberect frayed scales; with sparse suberect white clavate striate setae; corbel plate of third tibia clothed with dense recumbent imbricate scales. *Tarsi* sparsely pubescent ventrally. Length: 3.8 mm.

Holotype: male. MEXICO: State of Puebla, Tehuacan, Höge. [B.M.N.H.] (1).

This species is related to *undulatus* and *championi* but is separated readily from them and all others by the very unusual scale covering. The very pale, apparently grey, color is quite distinct as well.

*Trachyphloeomimus mexicanus* O'Brien, NEW SPECIES

(Fig. 3, 7, 13)

Black; clothed densely with contiguous recumbent striate black and brown scales; with suberect clavate scales.

*Rostrum* ca. ¼ wider at apex than base, clothed densely with subrecumbent striate brown scales; with 4 rows of suberect coarse brown setae; with median sulcus; apex subglabrous with a few elongate erect fine setae. *Head* shallowly densely punctate, clothed with dense recumbent striate scales; frons with elongate sulcus; lateral protrusions weak, not expanded over eyes; clothed with dense recumbent striate brown and a few white scales; and with 4 or 5 erect to suberect clavate scalelike setae. *Antennae* with stout, slightly curved scape, clothed densely with recumbent striate brown scales and sparse erect coarse setae, funicle with sparse fine golden setae. *Prothorax* evenly expanding to suddenly constricted apical ¼, apex tubulate, unevenly deeply coarsely punctate with areas between punctures distinctly elevated, with sparse subrecumbent clavate black to brown setae; and with dense recumbent striate black, brown, and white scales. *Scutellum* small, triangular, and glabrous. *Elytra* with humeri slightly projecting anteriorly, subquadrangular, 7th interval expanded behind humeri, 8th interval not projecting; striae punctures scarcely visible due to dense scale cover, anterior punctures round and deep, posterior punctures elongate and shallow, lacking setae; intervals 3, 5, and 7 distinctly convex, sutural interval convex behind declivity, other intervals

flat; 5th interval strongly broadly tuberculate on declivity; all intervals with a row of suberect clavate curved striate setae and densely clothed with contiguous recumbent striate brown, black, and brownish white scales. *Venter* evenly clothed with moderately dense recumbent striate whitish brown scales, with sparse fine to coarse golden brown setae; 1st suture weakly sinuate; 1st segment convex; 5th segment with base weakly evenly convex, apex very weakly evenly broadly depressed. *Legs* clothed with dense recumbent striate brown and brownish white scales; with moderately dense, coarse to clavate, erect, short to moderately long (less than  $\frac{1}{2}$  width of tibia), brown to white setae; corbel plate with coarse erect setae. Tarsi moderately densely pubescent ventrally. Length: 3.4 mm. (female holotype). *Male*: 1st ventral segment broadly concave; 5th segment with distinct moderately narrow median depression. Length: 2.7 mm. (allotype).

Holotype: female. MEXICO: Tamaulipas, Gomez Farias, Rancho del Cielo, 3700', 4-VII-1969, S. and J. Peck, cloud forest litter, Ber. 165. Holotype, allotype [C. W. O'B.] and 4 paratypes. [C. W. O'B.] (2), [B. M. N. H.] (1), [M. C. Z.] (1).

This species appears to be most closely related to *solitarius*, but its lack of papillae and dense recumbent scale covering are quite distinct. It resembles most closely *spurcus*, but is more brown in color, is smaller, and possesses much shorter setae, especially on the rostrum and prothorax. It also resembles *alternatus* but its punctures are not visible due to its even scale covering, and it has relatively fine punctures on the apex of the rostrum.

Although the elevation of the type locality is much lower than that for the other species, they were collected in a cloud forest.

*Trachyploeomimus undulatoides* O'Brien, NEW SPECIES

(Fig. 14, 16)

Black; clothed densely with recumbent, striate, brown, blackish brown, and a few white scales, maculate; with moderately sparse suberect clavate scales.

*Rostrum* scarcely wider at apex than base; base to antennal insertion densely clothed with recumbent imbricate striate dark brown scales, strongly convex with a deep moderately narrow median sulcus, with 4 rows of erect coarse brown to brownish white setae; apex shining, subglabrous with sparse recumbent golden scales and very sparse long fine golden setae. *Head* densely clothed with recumbent imbricate striate scales, with dense shallow visible punctures; frons densely clothed with recumbent imbricate striate scales, narrower (ca.  $\frac{1}{3}$ ) than apex of rostrum, laterally convex, with median sulcus continuous with rostral sulcus, not separate from rostrum, lateral protrusions weak, not expanded over eyes, with 2 long erect coarse white setae and a somewhat more median subclavate brown seta. *Antennae* with strongly clavate, moderately curved scape with dense recumbent imbricate striate brown scales and moderately sparse erect coarse brown to brownish white coarse setae; funicle with sparse fine golden setae. *Prothorax* evenly expanding from base to suddenly constricted strongly tubulate apex; densely clothed with recum-

bent striate black, brown, and white scales; with deep coarse punctures; surface very uneven, with uneven rows of erect coarse scalelike black, brown, and white setae; lateral margin and median depression clothed with white scales. *Scutellum* small, triangular, densely clothed with subrecumbent clavate scalelike white setae. *Elytra* with anteriorly projecting humeri, subrectangular at approximately a 30° angle with base, with interval 8 strongly expanded behind humeri; striae punctures unevenly separated, distinct, round, moderately deep, separated by 1½ to 3½ times their own diameter, each with a minute barely visible seta; intervals 1, 3, 5, and 7 unevenly convex, surface in general unevenly undulating; interval 5 strongly rectangularly tuberculate at declivity, all intervals with an uneven row of clavate brown to white scalelike subrecumbent to suberect setae, denser on odd intervals. *Venter* evenly clothed with dense recumbent striate brown scales and sparse suberect moderately coarse white to golden setae; 1st suture weakly bisinuate; 5th segment with 3 deep evenly spaced small apical depressions; margin raised, shining, with moderately dense fine whitish setae. *Legs* clothed densely with recumbent striate black scales, femora annulate with white scales; with suberect moderately long (ca. ½ width of tibiae) coarse brown and white scalelike setae; corbel plate narrow, glabrous. *Tarsi* densely pubescent ventrally. Length: 3.8 mm.

Holotype: female. MEXICO: State of Mexico, Parque Nacional Miguel Hidalgo, ca. 2900 meters, under stones, C. W. O'Brien, Holotype [C.W.O'B.]. Three paratypes, same data, except collector S. Rosenthal [B.M.N.H.] (1), [C.W.O'B.] (2); One paratype, Pradera de [meadow of] Salazar, [ca. 2900 meters], 17-II-1972, under stones, C. W. O'Brien [C.W.O'B.] (1). One paratype, state unknown, Llano Grande, 6-V-1962, M. Olguin [R.M.V.C.] (1).

This species closely resembles the Guatemalan *undulatus*. It can be easily distinguished by its lack of a tubercle at the declivity of the 6th interval and its very distinctly scale-covered scutellum. The scales may be rubbed in older specimens. It is smaller, but longer series may indicate an overlap in size. The very strongly undulate surface will separate it from other species.

*Trachyphloeomimus alternatus* O'Brien, NEW SPECIES

(Fig. 15, 17)

Black; clothed with recumbent imbricate striate scales, with moderately dense suberect striate clavate scalelike setae.

*Rostrum* weakly widened to apex; base moderately convex laterally, with a narrow median sulcus, clothed densely with suberect striate scales with 4 rows of erect clavate scalelike setae; apex coarsely punctured with sparse golden and greenish white recumbent scales, and coarse erect brown and white setae. *Head* with dense subrecumbent striate scales, punctures scarcely visible; frons with narrow median sulcus, clothed with dense suberect striate scales and several erect clavate scalelike setae, with 3 lateral long white and brown scalelike setae, lateral protrusions weakly expanded over eyes. *Antennae* with stout moderately curved scape, with moderately dense recumbent striate brown scales; funicle with moderately dense coarse golden brown setae. *Prothorax* with sides rounded to a

broadly expanded rounded subapex, then suddenly constricted to a tubulate apex; with dense coarse deep visible punctures, with dense imbricate recumbent striate brown, black, and white scales, irregularly maculate, surface only slightly uneven except for punctures. *Scutellum* small, triangular, with dense recumbent to subrecumbent whitish scales. *Elytra* with humeri slightly projecting anteriorly, with ca. 60° angle behind; 8th interval weakly projecting behind humeri; strial punctures moderate, round, moderately shallow, unevenly separated, each with a minute fine seta; intervals 1, 3, 5, and 7 convex, even intervals flat, all clothed densely with imbricate recumbent striate scales, odd intervals with dense uneven subrecumbent to suberect overlapping striate clavate scalelike setae; even intervals with similar setae, separated by 1 to 2 times their length. *Venter* coarsely punctate, densely clothed with imbricate recumbent striate scales, with sparse subrecumbent clavate scalelike setae; first suture weakly bisinuate; 5th segment very coarsely densely punctate, with a weak median apical depression. *Legs* with imbricate recumbent striate brown scales; femora subannulate with white scales; with short suberect clavate white and brown setae; corbel plate of third tibia glabrous. Tarsi sparsely pubescent ventrally. Length: 3.5 mm.

Holotype: female. MEXICO: State of Mexico, Pradera de [meadow of] Salazar, 17-II-1972, [ca. 2900 meters], under stones, C. W. O'Brien, Holotype [C.W.O'B.], 4 paratypes [C.W.O'B.] (2), [B.M.N.H.] (1), [M.H.N.M.] (1); 2 paratypes, same data, except collector P. Reyes C. [C.W.O'B.] (2).

This species is related to *mexicanus* and *spurcus* but the coarsely punctured apex of its rostrum is diagnostic. The scalelike setae of the odd intervals are denser and less even in this species than any other. Occasionally such setae are double. Its scutellum possesses scalelike setae while the others are glabrous.

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Specimens are deposited in the following collections: [B.M.N.H.] British Museum of Natural History, London; [M.C.Z.] Museum of Comparative Zoology, Harvard University, Cambridge, Mass.; [C.W.O'B.] private collection, Charles W. O'Brien, Tallahassee, Florida; [R.M.V.C.] private collection, Raul Muñoz V., Ciudad de Mexico, Distrito Federal, Mexico; and [M.H.N.M.] Museo de Historia Natural de la Ciudad de Mexico, Distrito Federal, Mexico.

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